

What is claimed is:

1. An apparatus for processing a radiation image, comprising:

a pixel-value analyzing section to analyze a pixel-value within a step pattern of a wedge area in which a density varies step by step, wherein said radiation image includes said wedge area; and

a suspicious region analyzing section to detect a candidate of a suspicious region by using information outputted from said pixel-value analyzing section.

2. The apparatus of claim 1,

wherein said suspicious region analyzing section comprises:

a gradation-adjusting section to adjust a gradation of said radiation image on the basis of information, pertaining to said pixel-values, outputted by said pixel-value analyzing section.

3. The apparatus of claim 1,

wherein said suspicious region analyzing section comprises:

a parameter-adjusting section to adjust a parameter for detecting said candidate of said suspicious

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region on the basis of information, pertaining to said pixel-value, outputted by said pixel-value analyzing section.

4. The apparatus of claim 2, further comprising:

a first suspicious region detecting section to detect said candidate of said suspicious region on the basis of said radiation image, said gradation of which is adjusted by said gradation-adjusting section.

5. The apparatus of claim 3, further comprising:

a second suspicious region detecting section to detect said candidate of said suspicious region by using said parameter adjusted by said parameter-adjusting section.

6. The apparatus of claim 4, further comprising:

an image-outputting section to output said radiation image, said gradation of which is adjusted by said gradation-adjusting section.

7. The apparatus of claim 4, further comprising:

an outputting section to output both a result of detecting said suspicious region in said first suspicious region detecting section and said radiation image adjusted by said gradation-adjusting section.

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8. The apparatus of claim 5, further comprising:

an outputting section to output both a result of detecting said suspicious region in said second suspicious region detecting section and said radiation image adjusted by said gradation-adjusting section.

9. The apparatus of claim 1, further comprising:

a step position-detecting device for detecting a step position of said wedge area on the basis of a feature of a change amount of pixel-values;

wherein a region of interest is determined on the basis of said step position detected by said step position-detecting device.

10. The apparatus of claim 9,

wherein said step position-detecting device finds an area, at which said pixel value varies step by step, by obtaining profiles at a plurality of positions in plural directions to recognize said step position.

11. The apparatus of claim 2, further comprising:

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an image-outputting section to output said radiation image, said gradation of which is adjusted by said gradation-adjusting section.

12. The apparatus of claim 2, wherein said radiation image is a mammography, further comprising:

an image-classifying section to classify said mammography, said gradation of which adjusted by said gradation-adjusting section, corresponding to a degree of involution of mammary glands.

13. The apparatus of claim 8, further comprising:

a gradation-adjusting section;

wherein said outputting section outputs said radiation image, said gradation of which is adjusted by said gradation-adjusting section.

14. The apparatus of claim 8, further comprising:

a step position-detecting device for detecting a step position of said wedge area on the basis of a feature of a change amount of pixel-values;

wherein a region of interest is determined on the basis of said step position detected by said step position-detecting device.

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15. The apparatus of claim 8, wherein said radiation image is a mammography, further comprising:

an image-classifying section to classify said mammography, said gradation of which adjusted by said gradation-adjusting section, corresponding to a degree of involution of mammary glands.

16. The apparatus of claim 6,

wherein said image-outputting section outputs at least one of a voltage applied to a radiation tube, a mA value, a sec. value, a kind of an added filter, a kind of a radiation tube, a thickness of a focal point size, a compressing pressure, an enlarging late and a tilt angle onto a partial area of said radiation image, on which a subject image does not overlap.

17. The apparatus of claim 15,

wherein said outputting section outputs at least one of a voltage applied to a radiation tube, a mAs value, a kind of an added filter, a kind of a radiation tube, a thickness of a focal point size, a compressing pressure, an enlarging late and a tilt angle onto said mammography.

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18. The apparatus of claim 4,

wherein said suspicious region analyzing section comprises:

a parameter-adjusting section to adjust a parameter for detecting said candidate of said suspicious region on the basis of information, pertaining to said pixel-value, outputted by said pixel-value analyzing section; and

a second suspicious region detecting section to detect said candidate of said suspicious region by using said parameter adjusted by said parameter-adjusting section.

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